ETHYL CORPORATION

CORPORATE ENVIRONMENTAL AFFAIRS

September 10, 1986

PLEASE ADDRESS REPLY
TO: 451 FLORIDA BLVD
BATON ROUGE, LA. 70801

Ms. Virginia Loselle
Michigan Department of Natural Resources
Groundwater Quality Division
15500 Sheldon Road
Northville, MI 48167

Dear Ms. Loselle:

This letter and the drawings enclosed provide the additional information you requested that we furnish prior to beginning the field work at Ethyl's Ferndale Laboratory.

The scaled plot plan precisely identifies the location of each of the erratic magnetometer readings in the open field across the north end of the property. We will dig back-hoe holes four to five feet deep at each of these spots to determine whether or not there is anything buried there. We will also dig as shown along the north-south magnetomer traverse in the small open area just south of the nine-acre plot.

The plot plan shows the proposed locations of the three new monitoring wells specified in your letter of August 18. This area north of the parking lot only measures about two hundred by one hundred feet. The groundwater flow is expected to be toward the southeast, but this estimate could easily prove to be in error by as much as thirty degrees. These locations were selected to provide a triangle for measuring the flow direction, an upgradient well, and the best choice of downgradient wells relative to the center of the western half of the plot, considering the range of likely flow directions. There were never any pits dug here for routine use, and we are unable to pinpoint a location better than this. This was strictly a matter of the occasional man with a beaker in one hand and a shovel in the other going out and digging a hole between the trees.

The wells will be four-inch PVC with PVC screen at the sand/clay interface. The sand is continuous to probably twenty feet below grade. All underground connections will be screwed or other mechanical joints with no solvent welding permitted. The wells will be sealed in place at the surface with concrete.

A split spoon sample will be collected during the drilling of each well and submitted to a laboratory for grain size analysis and soil classifications.

The plot plan locates the areas of the scaled maps of the former gasoline tank farms and the existing monitoring wells. The map of the areas where the gasoline storage tanks were removed shows the precise points where soil gas testing will be performed. The Ferndale Fire Marshall monitored the tank removal in 1985 and noted no sign of contamination in any of the holes. Soil gas samples will be collected in carbon tubes using a calibrated portable vacuum pump and turned over to a commercial laboratory for quantitative and qualitative analyses by gas chromatography.

The scaled map of the monitoring well locations shows the high pressure laboratory, "AE Building", and the small pits northwest of it. The pits are numbered in chronological order. The relative static water levels on the map, measured in April, 1986, indicate that the direction of flow is toward the southeast. Wells Number 1 and 2 are downgradient from the pits; Number 4 and 5 are upgradient. Since there is no requirement for more than one upgradient well, we propose to save the cost of analyzing Number 5 again. The location of the broken well is crossgradient, and nothing would be added to the picture by putting it back in service.

Following installation of the three new wells north of the parking lot, we will sample them plus the old wells pertinent to the pit area and have the samples analyzed for volatile organics and lead.

City water, which is piped to Detroit from Lake Huron, is the only water source in this area. Peter Shirey, Geological Survey Division of the Michigan DNR, searched and found that their files contained no well log data or other information on any water wells within three miles of the laboratory. He concluded from this that it is very unlikely that there is an aquifer near our property. We tried unsuccessfully to install a well on the property many years ago. The well log showed smooth sea sand from the surface to 23 feet, white clay to 150 feet, and mixed clay and shale from there to 560 feet, but no water.

We can probably be ready to begin the field work specified by the week of September 15, and can finish it before the end of the month. We know you will monitor the back-hoe work and the sampling, but please advise if you intend to follow the well installations in order that we may coordinate our efforts.

Very truly yours,

C. E. Colvin

C. E. Colvin

CEC:imc

cc: D. C. Bach
D. E. Park

Talked to C.E. Colvin on 10/1/86 regarding his 10/10/86 submittal. I approved the plan/the following changes:
a) well 5 or 10 ft screens wrapped/not slotted
(ex monitor well 5, the existing wells 2 & #3)

1